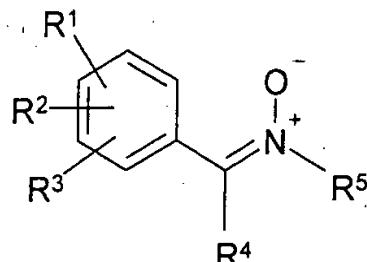


WHAT IS CLAIMED IS:

1. A compound of formula I:



10 wherein

R¹ is selected from the group consisting of alkoxy, alkaryloxy, alkycycloalkoxy, aryloxy, and cycloalkoxy;

15 R² is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen, or when R¹ and R² are attached to adjacent carbon atoms, R¹ and R² may be joined together to form an alkylidendioxy group;

R³ is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen;

20 R⁴ is selected from the group consisting of hydrogen and alkyl;

25 R⁵ is selected from the group consisting of alkyl having at least 3 carbon atoms, substituted alkyl having at least 3 carbon atoms and cycloalkyl;

provided that:

(i) when R² and R³ are independently hydrogen or methoxy, R¹ is not methoxy;

25 (ii) when R², R³ and R⁴ are hydrogen and R⁵ is *tert*-butyl, then R¹ is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;

(iii) when R², R³ and R⁴ are hydrogen and R⁵ is isopropyl, then R¹ is not 4-ethoxy;

(v) when R², R³ and R⁴ are hydrogen and R⁵ is 1-hydroxy-2-methylprop-2-yl, then R¹ is not 2-ethoxy;

(vi) when R¹ is 4-methoxy, R² is 3-ethoxy, and R³ and R⁴ are hydrogen, then R⁵ is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and

5 (vii) when R³ and R⁴ are hydrogen and R⁵ is *tert*-butyl, then R¹ is not 4-methoxy when R² is 2-fluoro, and R¹ is not 2-methoxy when R² is 4-fluoro.

2. The compound according to Claim 1 wherein R⁴ is hydrogen.

10 3. The compound according to Claim 2 wherein R³ is selected from the group consisting of hydrogen and alkoxy.

15 4. The compound according to Claim 3 wherein R² is selected from the group consisting of hydrogen, alkoxy and fluoro.

5. The compound according to Claim 4 wherein R¹ is selected from the group consisting of alkoxy, alkaryloxy and cycloalkoxy.

20 6. The compound according to Claim 4 wherein R¹ and R² are joined together to form an alkylene dioxy group.

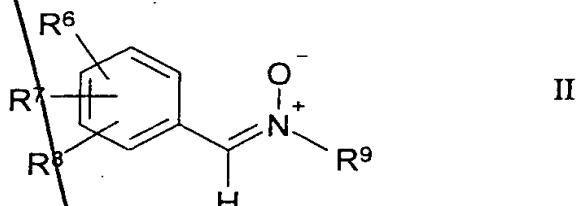
7. The compound according to Claim 5 or 6 wherein R⁵ is selected from the group consisting of alkyl having 3 to about 8 carbon atoms and cycloalkyl having 3 to about 10 carbon atoms.

25 8. The compound according to Claim 7 wherein R⁵ is selected from the group consisting of *n*-propyl, isopropyl, 1-methoxy-2-methylprop-2-yl, *n*-butyl, but-2-yl, *tert*-butyl, 2-methylbut-2-yl, 3-methylbut-1-yl, 3,3-dimethylbut-2-yl, 4-methylpent-2-yl, 2,4-dimethyl-2-pentyl, 2,2,4,4-tetramethylpent-3-yl,

cyclopropyl, cyclobutyl, *tert*-octyl, cyclopentyl, cyclohexyl, cyclooctyl, 1-adamantyl, 2-adamantyl, 3,5-dimethyl-1-adamantyl and benzyl.

9. A compound of formula II:

5



10

wherein

R⁶ is selected from the group consisting of alkoxy having 1 to 8 carbon atoms, alkaryloxy having 7 to 10 carbon atoms and aryloxy having 6 to 10 carbon atoms;

15

R⁷ is selected from the group consisting of alkoxy having 1 to 8 carbon atoms and fluoro, or when R⁶ and R⁷ are attached to adjacent carbon atoms, R⁶ and R⁷ may be joined together to form an alkylenedioxy group having 1 to about 6 carbon atoms;

20

R⁸ is selected from the group consisting of hydrogen and alkoxy having 1 to 8 carbon atoms; and

R⁹ is selected from the group consisting of alkyl having 3 to about 8 carbon atoms, substituted alkyl having 3 to about 8 carbon atoms and cycloalkyl having 3 to about 10 carbon atoms;

provided that:

25

(i) when R⁷ is methoxy and R⁸ is hydrogen or methoxy, R⁶ is not methoxy;

(ii) when R⁶ and R⁷ are joined together to form a 3,4-methylenedioxy group and R⁸ is hydrogen, then R⁹ is not isopropyl or *tert*-butyl; and

30

(iii) when R⁶ is 4-methoxy, R⁷ is 3-ethoxy and R⁸ is hydrogen, then R⁹ is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl.

10. The compound according to Claim 9 wherein R⁶ is alkoxy having 1 to 8 carbon atoms, R⁷ is alkoxy having 2 to 8 carbon atoms and R⁸ is hydrogen.

5

11. The compound according to Claim 10 wherein R⁶ is methoxy, R⁷ is ethoxy and R⁸ is hydrogen.

12. The compound according to Claim 9 wherein R⁶ is ethoxy; and R⁷ and R⁸ are hydrogen.

10 13. The compound according to Claim 9 wherein R⁶ is benzyloxy, R⁷ is alkoxy having 1 to 8 carbon atoms, and R⁸ is hydrogen.

15 14. The compound according to Claim 9 wherein R⁶ is benzyloxy; and R⁷ and R⁸ are hydrogen.

20 15. The compound according to Claim 9 wherein R⁶ is alkoxy having 1 to 8 carbon atoms, R⁷ is fluoro and R⁸ is hydrogen.

16. The compound according to Claim 9 wherein R⁶ and R⁷ are joined together to form a methylenedioxy or ethylenedioxy group and R⁸ is hydrogen.

25 17. The compound according to Claim 9 wherein R⁶, R⁷ and R⁸ are each independently alkoxy having 2 to 8 carbon atoms.

30 18. A compound selected from the group consisting of:
α-(4-heptyloxyphenyl)-N-*tert*-butylnitrone
α-(4-hexyloxyphenyl)-N-*n*-propylnitrone
α-(3-ethoxy-4-methoxyphenyl)-N-*tert*-butylnitrone

- α -(4-ethoxyphenyl)-*N*-*tert*-butylnitrone
 α -(4-benzyloxy-3-methoxyphenyl)-*N*-*tert*-butylnitrone
 α -[3-(4-methoxyphenoxy)phenyl]-*N*-*tert*-butylnitrone
 α -(2-ethoxyphenyl)-*N*-*tert*-butylnitrone
5 α -(3,4-ethylenedioxyphenyl)-*N*-*tert*-butylnitrone
 α -(3,4-methylenedioxyphenyl)-*N*-*tert*-butylnitrone
 α -(4-ethoxyphenyl)-*N*-cyclohexylnitrone
 α -(4-benzyloxy-3-methoxyphenyl)-*N*-cyclohexylnitrone
10 α -(3-ethoxy-4-methoxyphenyl)-*N*-cyclohexylnitrone
 α -(3,4-ethylenedioxyphenyl)-*N*-cyclohexylnitrone
 α -(4-ethoxy-3-methoxyphenyl)-*N*-cyclohexylnitrone
 α -(3,4-ethylenedioxyphenyl)-*N*-isopropylnitrone
15 α -(3-ethoxy-4-methoxyphenyl)-*N*-isopropylnitrone
 α -(2-ethoxyphenyl)-*N*-isopropylnitrone
 α -(2-ethoxyphenyl)-*N*-cyclohexylnitrone
 α -(4-benzyloxy-3-methoxyphenyl)-*N*-isopropylnitrone
20 α -(4-ethoxy-3-methoxyphenyl)-*N*-*n*-butylnitrone
 α -(4-ethoxy-3-methoxyphenyl)-*N*-*n*-butylnitrone
 α -(2-ethoxyphenyl)-*N*-*n*-butylnitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-*n*-butylnitrone
 α -(3-ethoxy-4-hexyloxyphenyl)-*N*-isopropylnitrone
25 α -(3-ethoxy-4-hexyloxyphenyl)-*N*-*tert*-butylnitrone
 α -(2-fluoro-4-octyloxyphenyl)-*N*-*tert*-butylnitrone
 α -(2,4,6-triethoxyphenyl)-*N*-*tert*-butylnitrone
 α -(2,4,6-triethoxyphenyl)-*N*-cyclohexylnitrone
 α -(2-*n*-butoxyphenyl)-*N*-*tert*-butylnitrone
30 α -(3,4-diethoxyphenyl)-*N*-*tert*-butylnitrone
 α -(2-fluoro-4-heptyloxyphenyl)-*N*-*tert*-butylnitrone

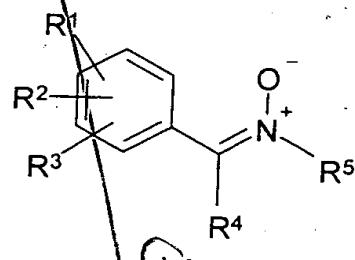
- α -(2-fluoro-4-ethoxyphenyl)-*N*-*tert*-butylnitrone
 α -(2-fluoro-4-ethoxyphenyl)-*N*-cyclohexylnitrone
 α -(2-ethoxyphenyl)-*N*-adamantylnitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-adamantylnitrone
5 α -(4-ethoxyphenyl)-*N*-cyclopentylnitrone
 α -(4-ethoxyphenyl)-*N*-*tert*-octylnitrone
 α -(4-benzyloxyphenyl)-*N*-*tert*-butylnitrone
 α -(4-benzyloxyphenyl)-*N*-cyclopentylnitrone
10 α -(4-benzyloxyphenyl)-*N*-cyclohexylnitrone
 α -(2-ethoxyphenyl)-*N*-cyclopentylnitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-*tert*-octylnitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-(2,4-dimethyl-2-pentyl)nitrone
15 α -(4-ethoxyphenyl)-*N*-*n*-butylnitrone
 α -(2-ethoxyphenyl)-*N*-benzylnitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-(2,2,4,4-tetramethylpent-3-yl)nitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-(4-methylpent-2-yl)nitrone
20 α -(3-ethoxy-4-methoxyphenyl)-*N*-but-2-ylnitrone
 α -(2-ethoxyphenyl)-*N*-but-2-ylnitrone
 α -[4-(4-fluorobenzyloxy)phenyl]-*N*-*tert*-butylnitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-cyclopentylnitrone
25 α -(3-ethoxy-4-methoxyphenyl)-*N*-*n*-propylnitrone
 α -(4-benzyloxyphenyl)-*N*-*n*-propylnitrone
 α -(4-benzyloxyphenyl)-*N*-isopropylnitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-(2-methylbut-2-yl)nitrone
30 α -(2-ethoxyphenyl)-*N*-(2-methylbut-2-yl)nitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-cyclooctylnitrone
 α -(2-ethoxyphenyl)-*N*-cyclobutylnitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-cyclobutylnitrone
 α -(4-benzyloxyphenyl)-*N*-cyclobutylnitrone
 α -(4-benzyloxyphenyl)-*N*-*tert*-octylnitrone

- α -[4-(4-fluorobenzyl)oxy]phenyl]-*N*-cyclohexylnitrone
 α -(2-ethoxyphenyl)-*N*-*tert*-octylnitrone
 α -[4-(4-fluorobenzyl)oxy]phenyl]-*N*-isopropylnitrone
 α -(2-ethoxyphenyl)-*N*-cyclooctylnitrone
5 α -(4-benzyl)oxyphenyl)-*N*-cyclopropylnitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-cyclopropylnitrone
 α -(4-benzyl)oxyphenyl)-*N*-cyclooctylnitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-(3,5-dimethyl-1-adamantyl)nitrone
 α -(4-benzyl)oxyphenyl)-*N*-1-adamantylnitrone
10 α -(3-ethoxy-4-methoxyphenyl)-*N*-(1-methoxy-2-methylprop-2-yl)nitrone
 α -(4-benzyl)oxyphenyl)-*N*-2-adamantylnitrone
 α -(4-ethoxyphenyl)-*N*-cyclooctylnitrone
 α -(4-ethoxyphenyl)-*N*-1-adamantylnitrone
 α -[4-(4-methoxybenzyl)oxy]phenyl]-*N*-*tert*-butylnitrone
15 α -(3-ethoxy-4-methoxyphenyl)-*N*-(3-methylbut-1-yl)nitrone
 α -(3-ethoxy-4-methoxyphenyl)-*N*-cyclooctylnitrone, and
 α -[4-(4-fluorobenzyl)oxy]phenyl]-*N*-cyclopentylnitrone
19. α -(2-Ethoxyphenyl)-*N*-*tert*-butylnitrone.
- 20 20. α -(2-Ethoxyphenyl)-*N*-cyclohexylnitrone.
- 21 21. α -(4-Ethoxyphenyl)-*N*-cyclohexylnitrone.
- 25 22. α -(4-Benzyl)oxyphenyl)-*N*-*tert*-butylnitrone.
23. 23. α -(4-Benzyl)oxyphenyl)-*N*-cyclopentylnitrone.
24. 24. α -(3-Ethoxy-4-methoxyphenyl)-*N*-adamantylnitrone.

25. α -(3-Ethoxy-4-methoxyphenyl)-*N*-*tert*-octylnitron.

26. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a pharmaceutically effective amount of a compound of formula I:

10



I

wherein

15 R^1 is selected from the group consisting of alkoxy, alkaryloxy, alkycycloalkoxy, aryloxy, and cycloalkoxy;

20 R^2 is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen, or when R^1 and R^2 are attached to adjacent carbon atoms, R^1 and R^2 may be joined together to form an alkylene dioxy group;

R^3 is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen;

R^4 is selected from the group consisting of hydrogen and alkyl;

25 R^5 is selected from the group consisting of alkyl having at least 3 carbon atoms, alkycycloalkyl and cycloalkyl;

provided that:

(i) when R^2 and R^3 are independently hydrogen or methoxy, R^1 is not methoxy;

(ii) when R^2 , R^3 and R^4 are hydrogen and R^5 is *tert*-butyl, then R^1 is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;

- (iii) when R², R³ and R⁴ are hydrogen and R⁵ is isopropyl, then R¹ is not 4-ethoxy;
- (iv) when R¹ and R² are joined together to form a 3,4-methylenedioxy group and R³ and R⁴ are hydrogen, then R⁵ is not isopropyl or *tert*-butyl;
- 5 (v) when R², R³ and R⁴ are hydrogen and R⁵ is 1-hydroxy-2-methylprop-2-yl, then R¹ is not 2-ethoxy;
- (vi) when R¹ is 4-methoxy, R² is 3-ethoxy, and R³ and R⁴ are hydrogen, then R⁵ is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- 10 (vii) when R³ and R⁴ are hydrogen and R⁵ is *tert*-butyl, then R¹ is not 4-methoxy when R² is 2-fluoro, and R¹ is not 2-methoxy when R² is 4-fluoro.

27. The pharmaceutical composition according to Claim 26 wherein R⁴ is hydrogen.

15 28. The pharmaceutical composition according to Claim 27 wherein R³ is selected from the group consisting of hydrogen and alkoxy.

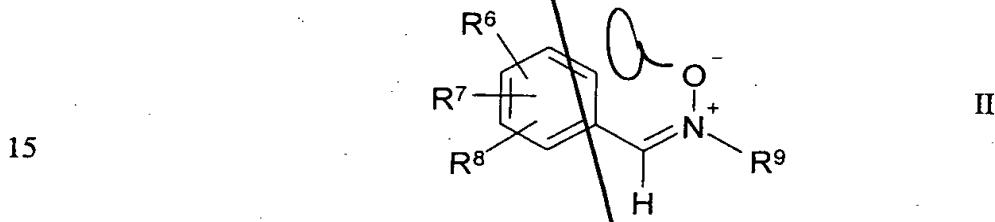
20 29. The pharmaceutical composition according to Claim 28 wherein R² is selected from the group consisting of hydrogen, alkoxy and fluoro.

30. The pharmaceutical composition according to Claim 29 wherein R¹ is selected from the group consisting of alkoxy, alkaryloxy and cycloalkoxy.

25 31. The pharmaceutical composition according to Claim 29 wherein R¹ and R² are joined together to form an alkylenedioxy group.

33. The pharmaceutical composition according to Claim 32, wherein R⁵ is selected from the group consisting of *n*-propyl, isopropyl, 1-methoxy2-methylproo-2-yl, *n*-butyl, but-2-yl, *tert*-butyl, 2-methylbut-2-yl, 3-methylbut-1-yl, 3,3-dimethylbut-2-yl, 4-methylpent-2-yl, 2,4-dimethyl-2-pentyl, 2,2,4,4-tetramethylpent-3-yl, cyclopropyl, cyclobutyl, *tert*-octyl, cyclopentyl, cyclohexyl, cyclooctyl, 1-adamantyl, 2-adamantyl, 3,5-dimethyl-1-adamantyl and benzyl.

10 34. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a pharmaceutically effective amount of formula II:



wherein

20 R⁶ is selected from the group consisting of alkoxy having 1 to 8 carbon atoms, alkaryloxy having 7 to 10 carbon atoms and aryloxy having 6 to 10 carbon atoms;

25 R⁷ is selected from the group consisting of alkoxy having 1 to 8 carbon atoms and fluoro, or when R⁶ and R⁷ are attached to adjacent carbon atoms, R⁶ and R⁷ may be joined together to form an alkyleneoxy group having 1 to about 6 carbon atoms;

R⁸ is selected from the group consisting of hydrogen and alkoxy having 1 to 8 carbon atoms; and

30 R⁹ is selected from the group consisting of alkyl having 3 to about 8 carbon atoms, substituted alkyl having 3 to about 8 carbon atoms and cycloalkyl having 3 to about 10 carbon atoms;

provided that:

- (i) when R⁷ is methoxy and R⁸ is hydrogen or methoxy, R⁶ is not methoxy;
- 5 (ii) when R⁶ and R⁷ are joined together to form a 3,4-methylenedioxy group and R⁸ is hydrogen, then R⁹ is not isopropyl or *tert*-butyl; and
- (iii) when R⁶ is 4-methoxy, R⁷ is 3-ethoxy and R⁸ is hydrogen, then R⁹ is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl.

10 35. The pharmaceutical composition according to Claim 34 wherein R⁶ is alkoxy having 1 to 8 carbon atoms, R⁷ is alkoxy having 2 to 8 carbon atoms and R⁸ is hydrogen.

15 36. The pharmaceutical composition according to Claim 35 wherein R⁶ is methoxy, R⁷ is ethoxy and R⁸ is hydrogen.

20 37. The pharmaceutical composition according to Claim 34 wherein R⁶ is benzyloxy, 4-fluorobenzyloxy or 4-methoxybenzyloxy and R⁷ and R⁸ are hydrogen.

25 38. The pharmaceutical composition according to Claim 34 wherein R⁶ is ethoxy and R⁷ and R⁸ are hydrogen.

39. The pharmaceutical composition according to Claim 34, wherein R⁶ is alkoxy having 1 to 8 carbon atoms, R⁷ is fluoro and R⁸ is hydrogen.

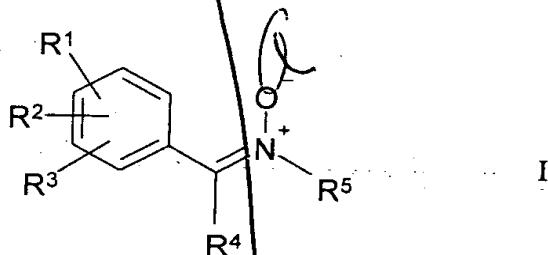
25 40. The pharmaceutical composition according to Claim 34 wherein R⁶ and R⁷ are joined together to form a methylenedioxy or ethylenedioxy group and R⁸ is hydrogen.

41. The pharmaceutical composition according to Claim 34 wherein R⁶, R⁷ and R⁸ are each independently alkoxy having 2 to 8 carbon atoms.

5 42. The pharmaceutical composition according to Claim 26 or 34 wherein the carrier is an oral carrier.

10 43. The pharmaceutical composition according to Claim 26 or 34 wherein the carrier is an injectable carrier.

15 44. A method for treating a patient with a neurodegenerative disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective neurodegenerative disease-treating amount of a compound of formula I:



20 wherein

R¹ is selected from the group consisting of alkoxy, alkaryloxy, alkycycloalkoxy, aryloxy, and cycloalkoxy;

25 R² is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen, or when R¹ and R² are attached to adjacent carbon atoms, R¹ and R² may be joined together to form an alkylenedioxy group;

R³ is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen;

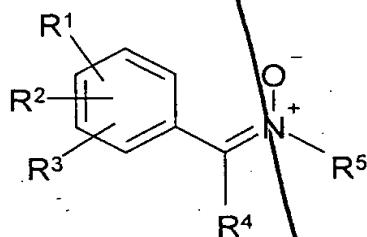
R⁴ is selected from the group consisting of hydrogen and alkyl;

R⁵ is selected from the group consisting of alkyl having at least 3 carbon atoms, substituted alkyl having at least 3 carbon atoms and cycloalkyl; provided that:

- (i) when R² and R³ are independently hydrogen or methoxy, R¹ is not methoxy;
- (ii) when R², R³ and R⁴ are hydrogen and R⁵ is *tert*-butyl, then R¹ is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;
- (iii) when R², R³ and R⁴ are hydrogen and R⁵ is isopropyl, then R¹ is not 4-ethoxy;
- (iv) when R¹ and R² are joined together to form a 3,4-methylenedioxy group and R³ and R⁴ are hydrogen; then R⁵ is not isopropyl or *tert*-butyl;
- (v) when R², R³ and R⁴ are hydrogen and R⁵ is 1-hydroxy-2-methylprop-2-yl, then R¹ is not 2-ethoxy;
- (vi) when R¹ is 4-methoxy, R² is 3-ethoxy, and R³ and R⁴ are hydrogen, then R⁵ is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R³ and R⁴ are hydrogen and R⁵ is *tert*-butyl, then R¹ is not 4-methoxy when R² is 2-fluoro, and R¹ is not 2-methoxy when R² is 4-fluoro.

45. A method for preventing the onset of a neurodegenerative disease in a patient at risk for developing the neurodegenerative disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective neurodegenerative disease-preventing amount of a compound of formula I:

25



I

30

wherein

B1
cont

R^1 is selected from the group consisting of alkoxy, alkaryloxy, alkycycloalkoxy, aryloxy, and cycloalkoxy;

R^2 is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen, or when R^1 and R^2 are attached to adjacent carbon atoms, R^1 and R^2 may be joined together to form an alkylenedioxy group;

R^3 is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen;

R^4 is selected from the group consisting of hydrogen and alkyl;

R^5 is selected from the group consisting of alkyl having at least 3 carbon atoms, substituted alkyl having at least 3 carbon atoms and cycloalkyl;
provided that:

(i) when R^2 and R^3 are independently hydrogen or methoxy, R^1 is not methoxy;

15 (ii) when R^2 , R^3 and R^4 are hydrogen and R^5 is *tert*-butyl, then R^1 is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;

(iii) when R^2 , R^3 and R^4 are hydrogen and R^5 is isopropyl, then R^1 is not 4-ethoxy;

20 (iv) when R^1 and R^2 are joined together to form a 3,4-methylenedioxy group and R^3 and R^4 are hydrogen, then R^5 is not isopropyl or *tert*-butyl;

(v) when R^2 , R^3 and R^4 are hydrogen and R^5 is 1-hydroxy-2-methylprop-2-yl, then R^1 is not 2-ethoxy;

(vi) when R^1 is 4-methoxy, R^2 is 3-ethoxy, and R^3 and R^4 are hydrogen, then R^5 is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and

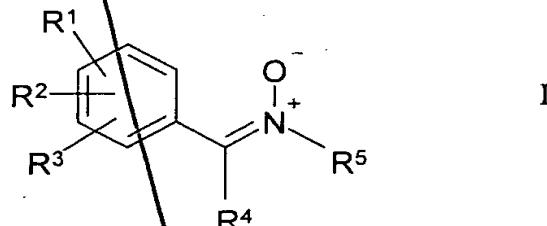
25 (vii) when R^3 and R^4 are hydrogen and R^5 is *tert*-butyl, then R^1 is not 4-methoxy when R^2 is 2-fluoro, and R^1 is not 2-methoxy when R^2 is 4-fluoro.

B Cont'

47. The method according to Claim 44 or 45 wherein the neurodegenerative disease is Parkinson's disease.

5 48. The method according to Claim 44 or 45 wherein the neurodegenerative disease is HIV dementia.

10 49. A method for treating a patient with an autoimmune disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective autoimmune disease-treating amount of a compound of formula I:



15

wherein

R¹ is selected from the group consisting of alkoxy, alkaryloxy, alkycycloalkoxy, aryloxy, and cycloalkoxy;

20 R² is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen; or when R¹ and R² are attached to adjacent carbon atoms, R¹ and R² may be joined together to form an alkylenedioxy group;

25 R³ is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen;

R⁴ is selected from the group consisting of hydrogen and alkyl;

R⁵ is selected from the group consisting of alkyl having at least 3 carbon atoms, substituted alkyl having at least 3 carbon atoms and cycloalkyl;

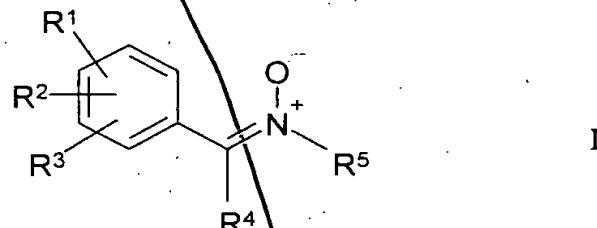
provided that:

- (i) when R^2 and R^3 are independently hydrogen or methoxy, R^1 is not methoxy;
- (ii) when R^2 , R^3 and R^4 are hydrogen and R^5 is *tert*-butyl, then R^1 is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;
- 5 (iii) when R^2 , R^3 and R^4 are hydrogen and R^5 is isopropyl, then R^1 is not 4-ethoxy;
- (iv) when R^1 and R^2 are joined together to form a 3,4-methylenedioxy group and R^3 and R^4 are hydrogen, then R^5 is not isopropyl or *tert*-butyl;
- 10 (v) when R^2 , R^3 and R^4 are hydrogen and R^5 is 1-hydroxy-2-methylprop-2-yl, then R^1 is not 2-ethoxy;
- (vi) when R^1 is 4-methoxy, R^2 is 3-ethoxy, and R^3 and R^4 are hydrogen, then R^5 is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R^3 and R^4 are hydrogen and R^5 is *tert*-butyl, then R^1 is not 4-methoxy when R^2 is 2-fluoro, and R^1 is not 2-methoxy when R^2 is 4-fluoro.

15

50. A method for preventing the onset of an autoimmune disease in a patient at risk for developing the autoimmune disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective autoimmune disease-preventing amount of a compound of formula I:

20



25 wherein

R^1 is selected from the group consisting of alkoxy, alkaryloxy, alkycycloalkoxy, aryloxy, and cycloalkoxy;

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R^2 is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen, or when R^1 and R^2 are attached to adjacent carbon atoms, R^1 and R^2 may be joined together to form an alkylenedioxy group,

5 R^3 is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen;

R^4 is selected from the group consisting of hydrogen and alkyl;

R^5 is selected from the group consisting of alkyl having at least 3 carbon atoms, substituted alkyl having at least 3 carbon atoms and cycloalkyl;

10 provided that:

 (i) when R^2 and R^3 are independently hydrogen or methoxy, R^1 is not methoxy;

 (ii) when R^2 , R^3 and R^4 are hydrogen and R^5 is *tert*-butyl, then R^1 is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;

15 (iii) when R^2 , R^3 and R^4 are hydrogen and R^5 is isopropyl, then R^1 is not 4-ethoxy;

 (iv) when R^1 and R^2 are joined together to form a 3,4-methylenedioxy group and R^3 and R^4 are hydrogen, then R^5 is not isopropyl or *tert*-butyl;

20 (v) when R^2 , R^3 and R^4 are hydrogen and R^5 is 1-hydroxy-2-methylprop-2-yl, then R^1 is not 2-ethoxy;

 (vi) when R^1 is 4-methoxy, R^2 is 3-ethoxy, and R^3 and R^4 are hydrogen, then R^5 is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and

 (vii) when R^3 and R^4 are hydrogen and R^5 is *tert*-butyl, then R^1 is not 4-methoxy when R^2 is 2-fluoro, and R^1 is not 2-methoxy when R^2 is 4-fluoro.

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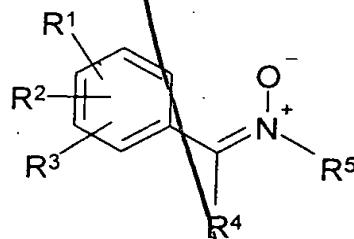
51. The method according to Claim 49 or 50 wherein the autoimmune disease is systemic lupus.

30 52. The method according to Claim 49 or 50 wherein the autoimmune disease is multiple sclerosis.

53. A method for treating a patient with an inflammatory disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective inflammatory disease-treating amount of a compound of formula I:

5

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wherein

R¹ is selected from the group consisting of alkoxy, alkaryloxy, alkycycloalkoxy, aryloxy, and cycloalkoxy;

15 R² is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen, or when R¹ and R² are attached to adjacent carbon atoms, R¹ and R² may be joined together to form an alkylene dioxy group;

20 R³ is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen;

R⁴ is selected from the group consisting of hydrogen and alkyl;

25 R⁵ is selected from the group consisting of alkyl having at least 3 carbon atoms, substituted alkyl having at least 3 carbon atoms and cycloalkyl;
provided that:

(i) when R² and R³ are independently hydrogen or methoxy, R¹ is not methoxy;

(ii) when R², R³ and R⁴ are hydrogen and R⁵ is *tert*-butyl, then R¹ is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;

(iii) when R², R³ and R⁴ are hydrogen and R⁵ is isopropyl, then R¹ is not 4-ethoxy;

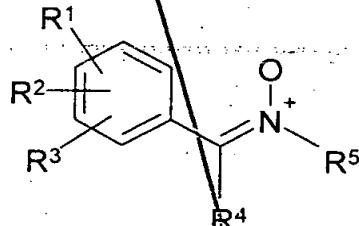
- (iv) when R¹ and R² are joined together to form a 3,4-methylenedioxy group and R³ and R⁴ are hydrogen, then R⁵ is not isopropyl or *tert*-butyl;
- (v) when R², R³ and R⁴ are hydrogen and R⁵ is 1-hydroxy-2-methylprop-2-yl, then R¹ is not 2-ethoxy;
- 5 (vi) when R¹ is 4-methoxy, R² is 3-ethoxy, and R³ and R⁴ are hydrogen, then R⁵ is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and
- (vii) when R³ and R⁴ are hydrogen and R⁵ is *tert*-butyl, then R¹ is not 4-methoxy when R² is 2-fluoro, and R¹ is not 2-methoxy when R² is 4-fluoro.

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54. A method for preventing the onset of an inflammatory disease in a patient at risk for developing the inflammatory disease which method comprises administering to said patient a pharmaceutical composition comprising a pharmaceutically acceptable carrier and an effective inflammatory disease-preventing amount of a compound of formula I:

15

20



wherein

R¹ is selected from the group consisting of alkoxy, alkaryloxy, alkycycloalkoxy, aryloxy, and cycloalkoxy;

25 R² is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen, or when R¹ and R² are attached to adjacent carbon atoms, R¹ and R² may be joined together to form an alkylenedioxy group;

30 R³ is selected from the group consisting of hydrogen, alkoxy, alkycycloalkoxy, cycloalkoxy and halogen;

(B3 cont.)

R^4 is selected from the group consisting of hydrogen and alkyl;

R^5 is selected from the group consisting of alkyl having at least 3 carbon atoms, substituted alkyl having at least 3 carbon atoms and cycloalkyl; provided that:

5 (i) when R^2 and R^3 are independently hydrogen or methoxy, R^1 is not methoxy;

(ii) when R^2 , R^3 and R^4 are hydrogen and R^5 is *tert*-butyl, then R^1 is not 4-*n*-butoxy, 4-*n*-pentyloxy or 4-*n*-hexyloxy;

10 (iii) when R^2 , R^3 and R^4 are hydrogen and R^5 is isopropyl, then R^1 is not 4-ethoxy;

(iv) when R^1 and R^2 are joined together to form a 3,4-methylenedioxy group and R^3 and R^4 are hydrogen, then R^5 is not isopropyl or *tert*-butyl;

(v) when R^2 , R^3 and R^4 are hydrogen and R^5 is 1-hydroxy-2-methylprop-2-yl, then R^1 is not 2-ethoxy;

15 (vi) when R^1 is 4-methoxy, R^2 is 3-ethoxy, and R^3 and R^4 are hydrogen, then R^5 is not 2,2-dimethylbut-3-yl or 1-hydroxy-2-methylprop-2-yl; and

(vii) when R^3 and R^4 are hydrogen and R^5 is *tert*-butyl, then R^1 is not 4-methoxy when R^2 is 2-fluoro, and R^1 is not 2-methoxy when R^2 is 4-fluoro.

20 55. The method according to Claim 53 or 54 wherein the inflammatory disease is rheumatoid arthritis.

56. The method according to Claim 53 or 54 wherein the inflammatory disease is septic shock.

25 57. The method according to Claim 53 or 54 wherein the inflammatory disease is erythema nodosum leprosy.

30 58. The method according to Claim 53 or 54 wherein the inflammatory disease is septicemia.

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Cont'd

59. The method according to Claim 53 or 54 wherein the inflammatory disease is uveitis.
60. The method according to Claim 53 or 54 wherein the inflammatory disease is adult respiratory distress syndrome.
61. The method according to Claim 53 or 54 wherein the inflammatory disease is inflammatory bowel disease.

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